OFFLU Swine Influenza Virus technical meeting
27 – 28 February 2019
OIE Headquarters, Paris, France

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FAO Reference Centre for Animal Influenza

SIV in Australia: 2012-2016 recap

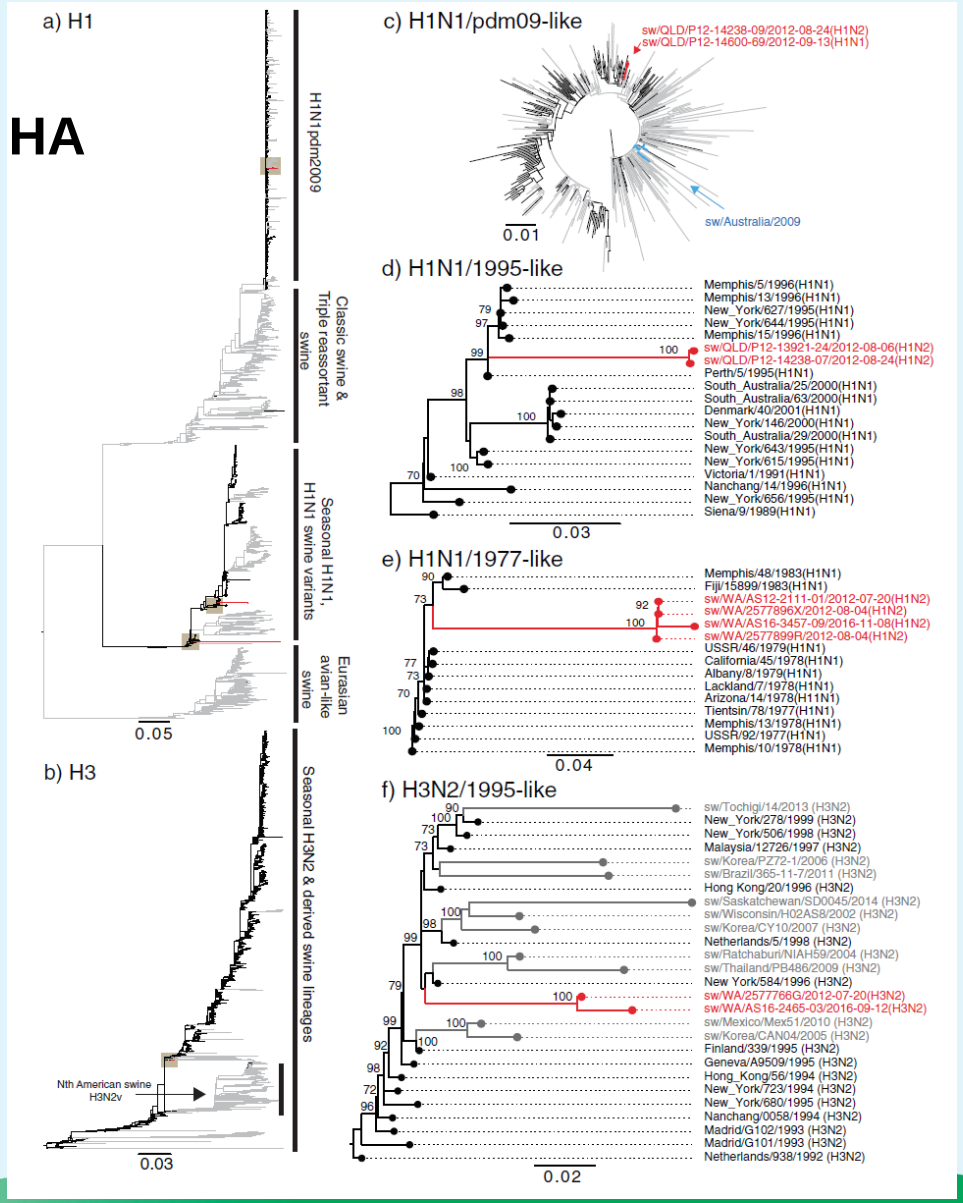
TABLE 1 Swine influenza virus isolated from Australian piggeries, 2012 to 2016

Strain	Collection date (day/mo/yr)	Subtype	HA clade[a]
sw/WA/AS12-2111-01/2012	20/7/2012	H1N2	Other-Human
sw/WA/2577766G/2012	20/7/2012	H3N2	Seasonal H3
sw/WA/2577896X/2012	4/8/2012	H1N2	Other-Human
sw/WA/2577899R/2012	4/8/2012	H1N2	Other-Human
sw/QLD/P12-13921-24/2012	6/8/2012	H1N2	Other-Human-1B.2[b]
sw/QLD/P12-14238-07/2012	24/8/2012	H1N2	Other-Human-1B.2
sw/QLD/P12-14238-09/2012	24/8/2012	H1N2	1A.3.3.2[c]
sw/QLD/P12-14600-69/2012	13/9/2012	H1N1	1A.3.3.2
sw/WA/AS16-2465-03/2016	12/9/2016	H3N2	Seasonal H3
sw/WA/AS16-3457-09/2016	8/11/2016	H1N2	Other-Human

[a]The nomenclature of H1 subtype viruses is based on reference 24.
[b]Previously termed "delta-like."

Wong et al. 2018. J Virol 92:e00316-18. https://doi.org/10.1128/JVI.00316-18.

SIV in Australia: 2012-2016 recap



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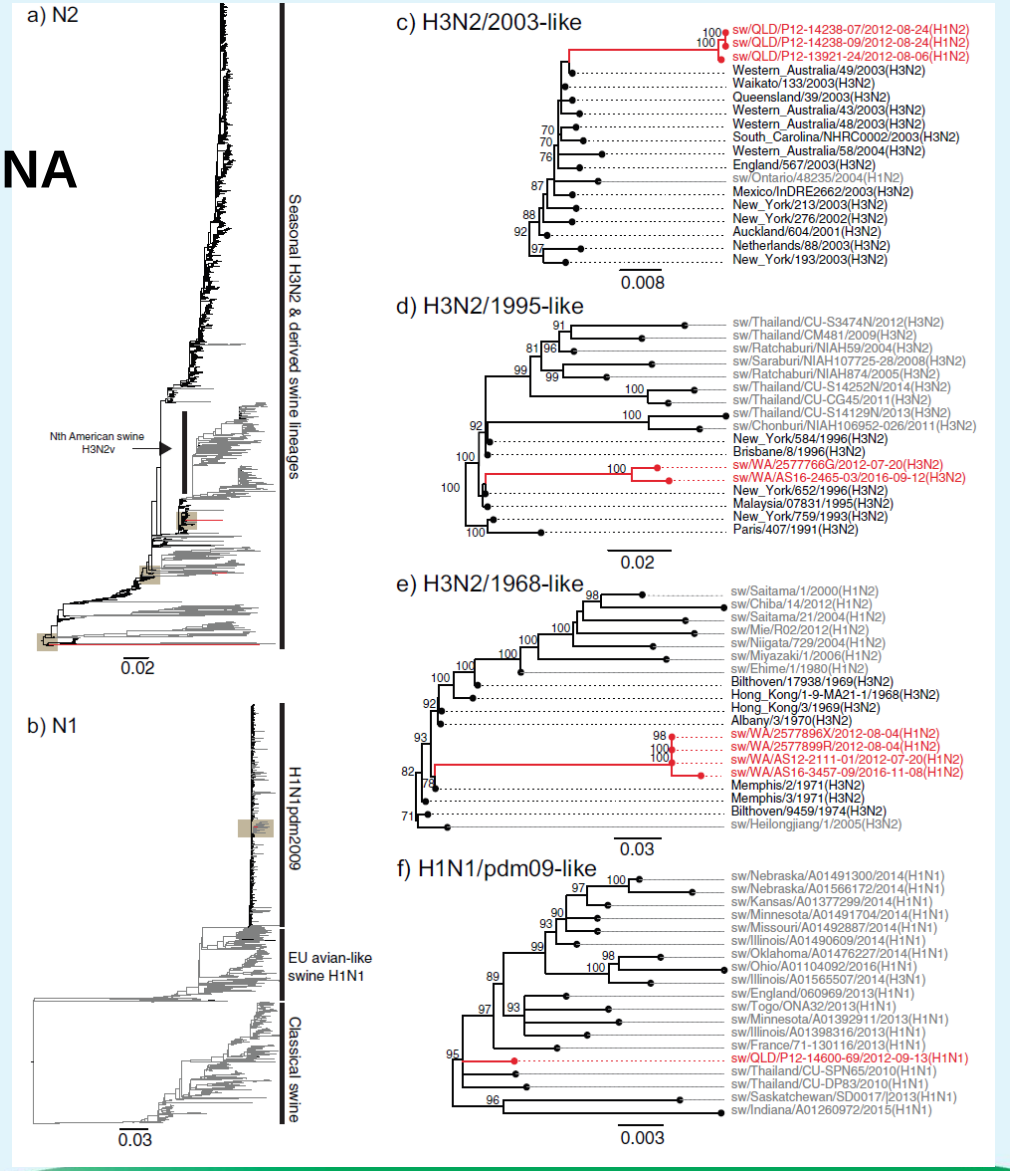
SIV in Australia: 2012-2016 recap



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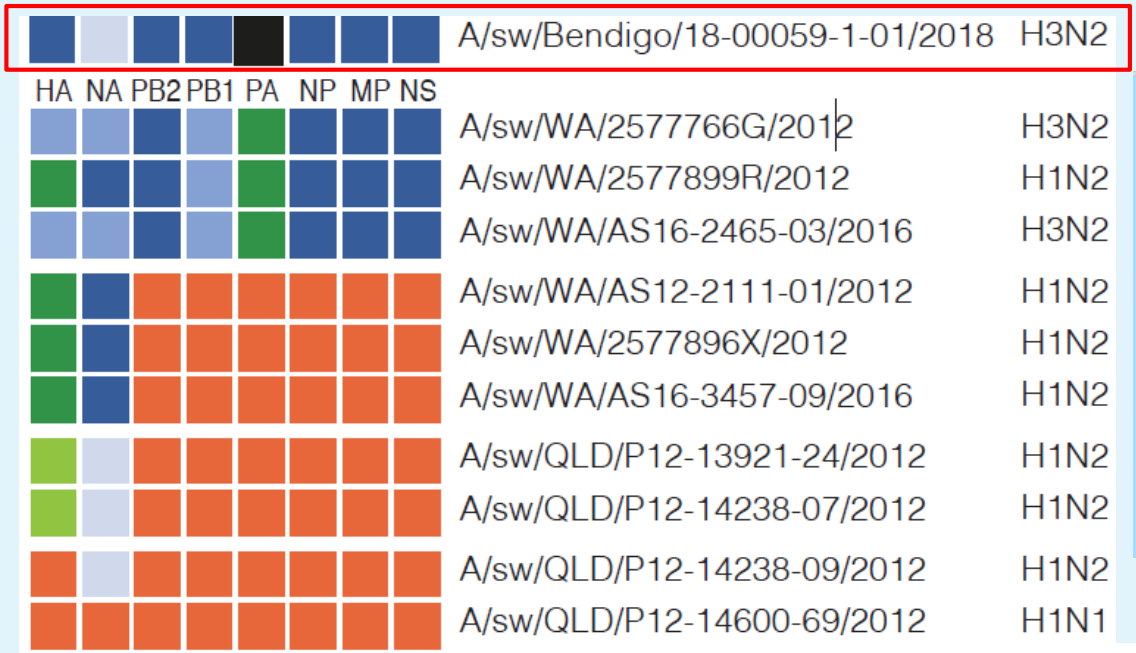
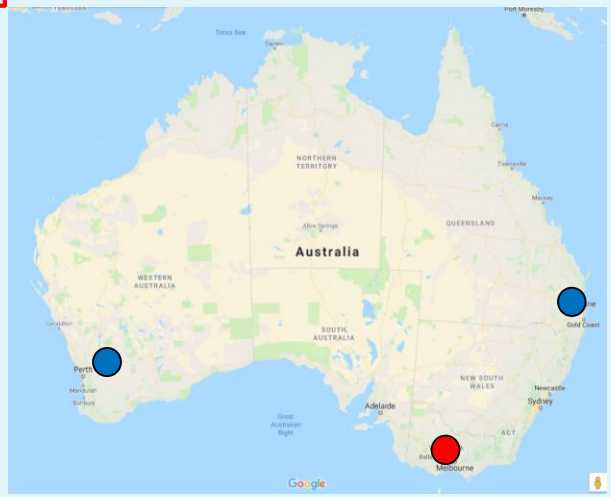
SIV in Australia: 2017





A/sw/Bendigo/18-00059-1-01/2018

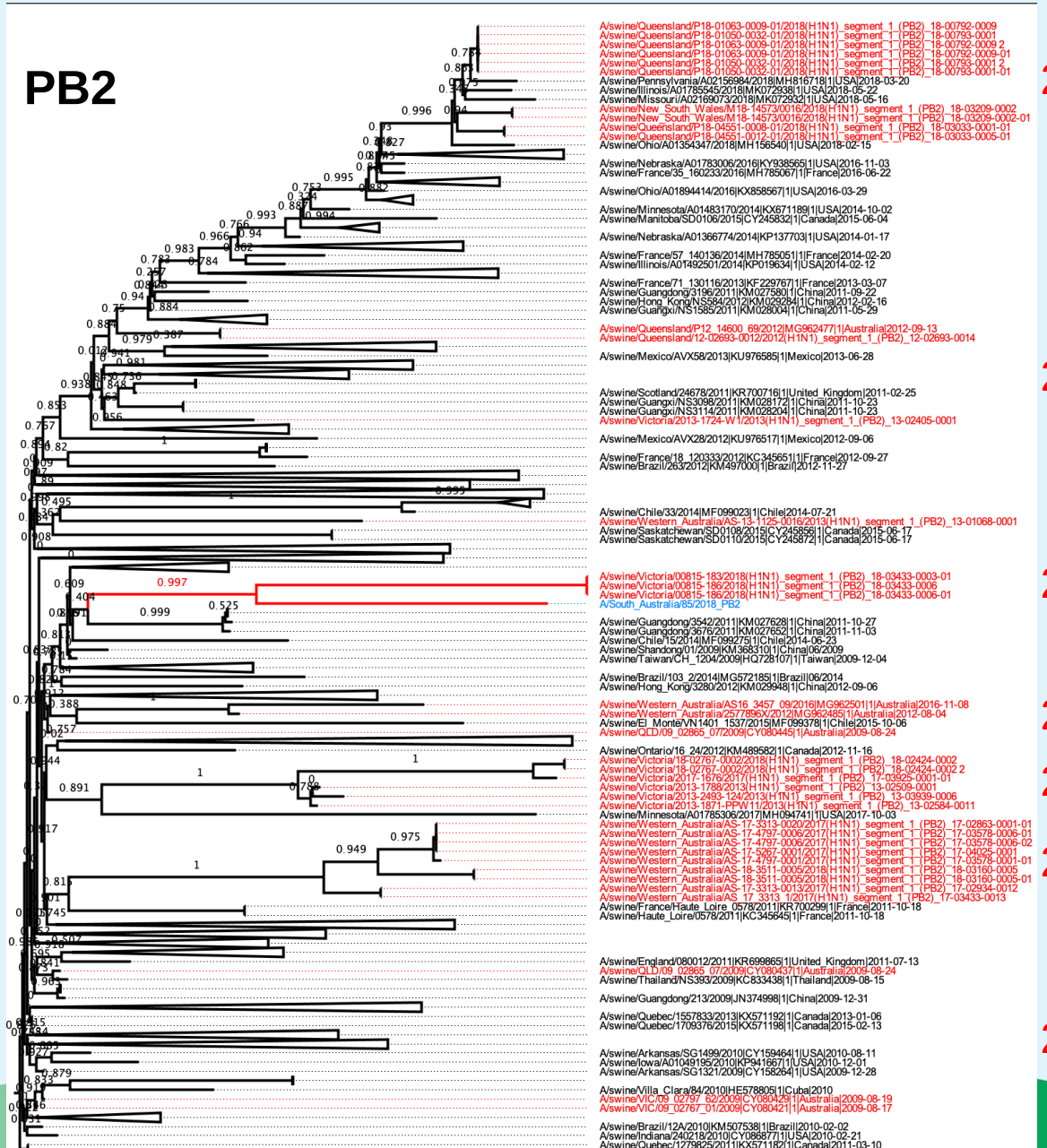
H1N1
- H1N1/1977
- H1N1/1995

H1N1pdm09

H3N2
- H3N2/1968 (HK68)
- H3N2/1981 (BK79)
- H3N2/1995 (WU95)
- H3N2/2003 (FU02)

Gene	Blast-hit	Identity
PB2	A/Memphis/1/1971	90%
PB1	A/Queensland/7/1970	90%
PA	A/Baylor/4052/1981	91%
H3	A/Hong Kong/1/1968	85%
NP	A/Queensland/7/1970	90%
N2	A/Canterbury/440/2003	94%
MP	A/Chiba/5/1971	93%
NS	A/Chiba/5/1971	88%

pH1N1 internal genes in Australian swine (red)



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World Health Organization

Antigenic and genetic characteristics of zoonotic influenza viruses and development of candidate vaccine viruses for pandemic preparedness

February 2019

Influenza A(H3N2)v[4]

Influenza A(H3N2) viruses are enzootic in swine populations in most regions of the world. Depending on geographic location, the genetic and antigenic characteristics of these viruses differ. Human infections with swine influenza A(H3N2) viruses have been previously documented in Asia, Europe and North America[4].

Influenza A(H3N2)v activity from 25 September 2018 to 17 February 2019

A human case of A(H3N2)v influenza virus infection was detected in Australia during routine screening of influenza positive samples. The case was a 15-year-old female with likely exposure at a livestock exhibition. This is the first documented case of a variant influenza virus human infection in Australia.

Antigenic and genetic characteristics of influenza A(H3N2)v viruses

Phylogenetic analyses of the HA and NA genes of the Australian virus, A/South Australia/85/2018, showed that it grouped with A(H3N2) swine influenza viruses detected in Australia and Asia, which were likely derived from seasonal A(H3N2) viruses that circulated in the late 1990s. The six internal genes of A/South Australia/85/2018 were derived from A(H1N1)pdm09 viruses circulating in pigs. Antigenic characterization of this virus is pending.

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Source: WHOCC Influenza, Melbourne (internal use only)